A MORE EFFICIENT AND EFFECTIVE UTILIZATION OF A U.S. FOREST SERVICE SEASONAL EMPLOYEE

Prepared for

Richfield Ranger District
Fishlake National Forest
USDA-Forest Service
Richfield, Utah 84701

Prepared by

Glenn E. Haas
Research Associate

Steven C. Nachtman
Research Assistant

Department of Recreation Resources
College of Forestry and Natural Resources
Colorado State University
Fort Collins, Colorado 80523

Fall, 1979

A MORE EFFICIENT AND EFFECTIVE UTILIZATION OF A U.S. FOREST SERVICE SEASONAL EMPLOYEE

Prepared for

Richfield Ranger District
Fishlake National Forest
USDA-Forest Service
Richfield, Utah 84701

Prepared by

Glenn E. Haas
Research Associate

Steven C. Nachtman
Research Assistant

Department of Recreation Resources
College of Forestry and Natural Resources
Colorado State University
Fort Collins, Colorado 80523

Fall, 1979

Acknowledgements

We wish to thank Dick Allred, Pete Libby, Mike Stubbs and Farrin Rex for their helpful involvement in this project. Special appreciation is extended to Les Ashton, Jim Carpenter, Betsy Crane and Krista Hurr for collecting observation/conversation data and their constructive comments.

TABLE OF CONTENTS

		Page
I.	INTRODUCTION	1
II.	THE PROBLEM	1
III.	GOAL AND OBJECTIVES	3
IV.	STUDY AREA	3
V.	METHODOLOGY	4
	1. Data Collection Instruments and Techniques	4
	a. Campsite Inventory Form	4
	b. Observation/Conversation Diary	6
	2. Field Scheduling	10
	3. Data Analysis and Summary	13
VI.	RESULTS	16
	1. Campsite Inventory Data	16
	2. Observation/Conversation Data	23
	a. Observation	23
	b. Conversation	29
	3. Estimated Recreation Visitor Days	32
VII.	CONCLUSION	35
	1. Personal Insights	35
	2. Recommendations for Management	36
VIII.	CASE STUDY SUMMARY	39
	Appendices	
	A. Visual Attractiveness Rating Class Definitions	40
	B. Field Instructions for Observation/Conversation Diary	42
	C. Seasonal Employee Daily Field Schedule	44
	D. Example of Dispersed Campsite Inventory Summary Map	49
	E. Observation/Conversation Summary Sheet	51

LIST OF TABLES

Page

1. Number and percent of total campsites in each sampling unit of Richfield Ranger District 17
2. Percent of campsites in each campsite rating class by sampling units, planning units, and the Richfield Ranger District 17
3. Percent of campsites having facilities present by sampling units, planning units, and the Richfield Ranger District 19
4. Percent of campsites having other campsites in view by sampling units, planning units, and the Richfield Ranger District 20
5. Percent of campsites having other campsites within 100 feet by sampling units, planning units, and the Richfield Ranger District . . 20
6. Percent of campsites in each overall visual attractiveness rating class by the sampling units, planning units, and the Richfield Ranger District 21
7. Percent of campsites at various distances from a road, trail, stream and lake by sampling unit, planning unit and Richfield Ranger District 22
8. The number of dispersed recreation party observations and interviews by sampling unit, planning unit, and the Richfield Ranger District 24
9. Percent of dispersed recreationists in each age group by planning unit and the Richfield Ranger District 24
10. Percent of dispersed recreation parties by size class and the average party size by planning unit and the Richfield Ranger District 26
11. The average length of stay and average number of nights by planning unit and the Richfield Ranger District 26
12. Percent of dispersed recreation parties in each time class by planning unit and the Richfield Ranger District 27
13. Percent of parties mode of travel by planning unit and the Richfield Ranger District 27
14. Percent of dispersed recreation parties engaging in various recreational activities by sampling unit and the Richfield Ranger District 28
15. Estimated recreation visitor days for the Richfield Ranger District (May 27 - September 3, 1979) 33

LIST OF FIGURES

1. Campsite Inventory Form 7

2. Observation/Conversation Form 8

3. Field Schedule 11

4. Flow Chart of Data Collection, Summary and Integration 14

INTRODUCTION

This report documents the cooperative effort between the Richfield Ranger District, Fishlake National Forest, Utah, and the Department of Recreation Resources, Colorado State University, which focused on the efficient and effective utilization of a seasonal recreation employee. The primary goal of the project was to demonstrate how a seasonal employee (Colorado State University summer intern) can collect, analyze and summarize information (data) concerning dispersed recreation users while being principally employed to perform other field tasks. This report will (1) detail the methodology used in the project and (2) present the data collected by the seasonal recreation employee. The methodology section describes how a seasonal employee can efficiently and effectively be utilized while the results and conclusion sections are an actual example of what a seasonal employee can produce for a District staff. It is our belief that through adequate planning and supervision, a product similar to the results and conclusion section can and should be produced by each seasonal recreation (field) employee prior to their job termination, particularly where the provision of recreation opportunities is a significant resource output.

THE PROBLEM

The philosophy and structure of the U.S. Forest Service is geared toward decision-making at the field or District level. With regard to recreation resources, seasonal employees are often closer to the current field situation than the District staff. These people work on the "front line" in the sense that their day-to-day work activities bring them in contact (seeing and conversing) with recreationists visiting the area. By the end of a seasonal's employment, he (she) is often the "resident expert" with regard to the

recreation phenomenon in a particular area. In many respects, seasonal employees will have more knowledge and a better intuitive feel for the current recreation situation than the District staff.

This is where the problem lies. The seasonal recreation employee has the information or knowledge about an area's visitors which the District staff needs. An "information transfer" problem exists. When the seasonal employee leaves to pursue another venture, this information is lost to the District.

Systematically collecting, analyzing, and summarizing information which is gained from observation of and conversation with recreationists can be an important means of assessing the current recreation situation and public involvement. It can aid in (1) describing the amount, type, and location of recreation groups and their activity participation, (2) in selecting management objectives, (3) in selecting management tools, techniques and/or actions to take, and (4) in monitoring and evaluating how satisfied recreationists are with the present management situation. Also, conversing with recreationists can aid in (1) improving public relations, (2) educating visitors about rules, regulations, low impact recreation, etc., and (3) providing information about an area that might help to distribute visitors and/or provide higher quality recreation experiences.

GOAL AND OBJECTIVES

Goal: Demonstrate how a seasonal employee can collect, analyze, and summarize data collected from observation of and conversation with dispersed recreationists while performing other field tasks.[1]

Objective 1: Perform a dispersed campsite inventory of the Richfield Ranger District.

Objective 2: While meeting objective #1, collect and record relevant data gained from observation of and conversation with dispersed recreationists.

Objective 3: Estimate the number of dispersed recreation visitor days occurring during summer months on the District.

Objective 4: Periodically summarize data and prepare a managerially useful report that includes the campsite inventory data, the recreation observation/conversation data, estimated visitor days, and the personal insights and recommendations of the seasonal employee.

STUDY AREA

The Richfield Ranger District is located on the Fishlake National Forest in central Utah. It encompasses approximately 450,000 acres with elevations ranging from approximately 5,400 to 11,000 feet. Big game, birds, rodents, furbearers and other mammals and fish common to the region inhabit the District. Numerous reservoirs and streams provide water and recreation opportunities. The primary resource products are range, water, wildlife, and dispersed recreation opportunities.

---

[1]Field tasks include such areas as timber, range, wildlife, watershed, fire, and/or recreation management. In this project, the seasonal job entailed recreation management or specifically, a dispersed campsite inventory. Regardless of the particular seasonal job, the fact that employees are in the field brings them in contact with recreationists and observation/conversation data could be collected.

The Richfield Ranger District occupies two geographically separate areas, the Monroe and Salina areas. For the purpose of this study, the Salina area will be referred to as the Salina Planning unit and the Monroe area as the Monroe Planning unit. The Salina Planning unit is further subdivided into S1, S2, and S3 sampling units and the Monroe Planning unit is further subdivided into M1 and M2 sampling units. These subdivisions aided in data collection and work scheduling and will be referred to throughout this report. Map 1 locates the Richfield Ranger District, the Salina and Monroe Planning units, and the sampling units used in this study.

METHODOLOGY

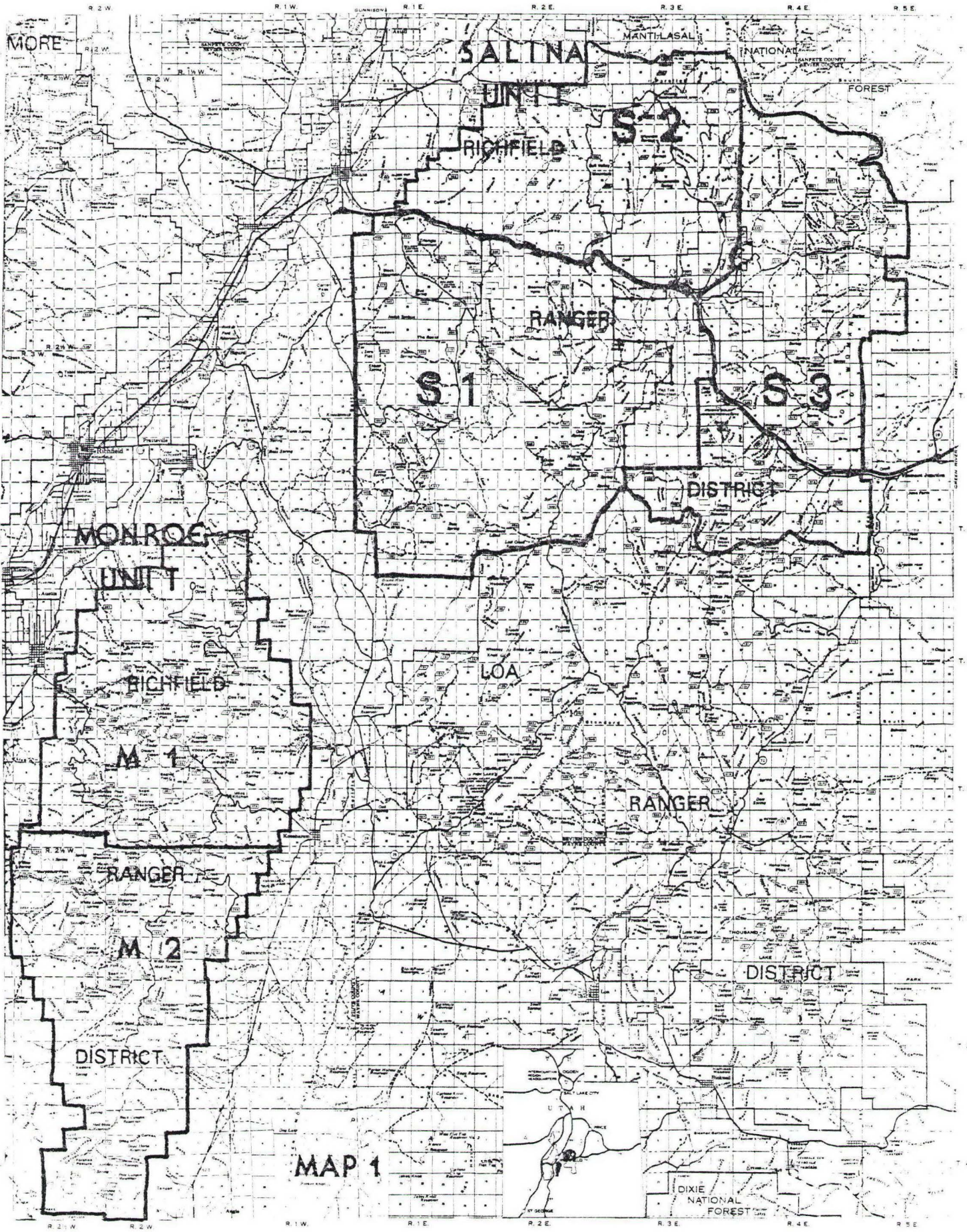
During the summer of 1979, the Richfield Ranger District of the Fishlake National Forest hired a Colorado State University (Department of Recreation Resources) summer intern to accomplish the aforementioned goal and objectives. This section will describe the data collection instruments and techniques, field scheduling, and data analysis and summary approach.

Data Collection Instruments and Techniques

The objectives of the project dictated that two data collection instruments be utilized by the seasonal employee: one for the dispersed campsite inventory and one for recording relevant recreation observation/conversation data.

Campsite Inventory Form

The basic question in developing this form was the kind and specificity of information to be collected. It was decided that the primary inventory objectives were to determine the number of dispersed campsites, their location, and condition. Based upon this objective, it was decided to utilize the Frissell campsite rating condition system as opposed to the more elaborate Code-A-Site system. In addition to Frissell's campsite rating classes, several additional variables were added: facilities present, visual attractiveness (see Appendix A


SALINA
UNIT
RICHFIELD
S 2
RANGER
S 1
S 3
DISTRICT
MONROE
UNIT
RICHFIELD
M 1
RANGER
M 2
DISTRICT
LOA
RANGER
DISTRICT
MANTI-LASAL
NATIONAL
FOREST
MORE
DIXIE
NATIONAL
FOREST
MAP 1

for definition of attractiveness rating classes), distances to relevant features, campsites in view, and the specific location of campsite. Figure 1 is the dispersed campsite inventory form used in this project. The back-side of Figure 1 defines the campsite rating classes.

Data collection required both field and office work. The field work involved the seasonal recreation employee travelling (roads and trails) throughout the District over the course of the summer. At each dispersed campsite, one form was completed and the campsite location noted on a 7.5 minute topographic map. Once back in the office, the location of each campsite and its respective rating class was transferred to a set of office maps.

Observation/Conversation Diary

During the course of the dispersed campsite inventory, the seasonal recreation employee observed and conversed with dispersed recreation parties. In order to record data, a structured diary form was developed (Figure 2).[2] One side of the diary form was for recording observation data and the reverse side for conversation data.

Observation Diary. The primary question in developing an observation diary was what information could be collected that would be useful in management. It was decided to collect data related to size of parties, age structure, mode of travel, activity participation, violations, and the location of the observation. Space was provided at the bottom of the form to record additional information.

Conversation Diary. As in the development of the observation diary, the primary question was what information could be collected that would be useful to management. It was decided to collect data related to length of visit,

---

[2]The observation/conversation diary form was printed on a convenient 5" x 7" pad. Each pad contained 100 forms and costs approximately $2.00.

CAMPSITE INVENTORY

ID:_____

INITIALS:_____ DATE:_____ TIME:_____

CAMPSITE (X) LOCATION: RANGE_____ TOWNSHIP_____

SECTION:_____

FACILITIES (Check if present)

_____TABLE _____TOILET (Within 200') _____SIGNS _____FIRE RING _____FIREWOOD

_____TRASH CAN _____OTHER (Specify):_____ _____OTHER (Specify):_____

CAMPSITE RATING CLASS:_____ COMMENTS:

OVERALL VISUAL ATTRACTIVENESS (360° from center of campsite): Check one -

_____Distinctive _____Common _____Minimal

DISTANCES (Check)

(In feet)	Campsites Within 300'	Road	Trail	Stream	Lake
1 - 50'					
51 - 100'					
101 - 200'					
Over 200'					

CAMPSITES IN VIEW:_____

CAMPSITE LOCATION - MAP

(LOCATION, MAJOR NATURAL AND MAN-MADE FEATURES, NORTH ARROW)

X = CAMPSITE LOCATION

P = PHOTO POINT

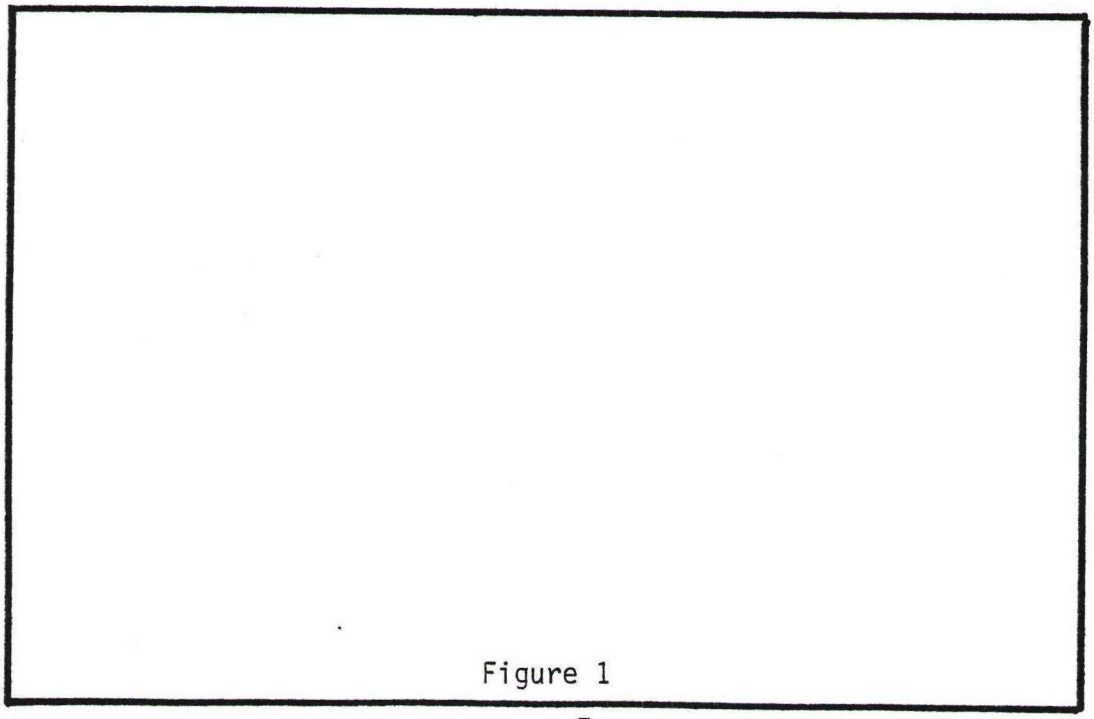


Figure 1

OBSERVATION DIARY

INITIALS:_____ DATE:_____ TIME:_____

ZONE:_____ SPECIFIC LOCATION:_____

_____

OF PEOPLE BY AGE GROUP:

-15	16-25	26-35	36-50	50+	= TOTAL
_____	_____	_____	_____	_____	_____

MODE OF TRAVEL (CIRCLE): HIKE HORSE HIKE WITH PACK ANIMAL

MOTORCYCLE 4-WHEEL VEHICLE NON-4-WHEEL VEHICLE

OTHER_____

IS PARTY -- (CIRCLE ONE): IN TRANSIT AT DESTINATION SITE

(CIRCLE ONE): ON ROAD/TRAIL OFF ROAD/TRAIL

ACTIVITIES PARTICIPATING IN:_____

_____

_____

VIOLATIONS OF RULES AND REGULATIONS SPECIFIC TO AREA?

OTHER OBSERVATIONS?

Figure 2 (Front-side)

CONVERSATION DIARY

TOTAL HOURS VISITING THE AREA (include entire trip):_____

TOTAL NIGHTS SPENT IN AREA (include entire trip):_____

TRAVEL ITINERARY (where entered, campsite location, will exit):_____

_____

_____

_____

RECREATION ACTIVITIES:_____

MOST SATISFYING POINTS OF TRIP (be specific):_____

_____

LEAST SATISFYING POINTS OF TRIP (be specific):_____

_____

PERCEPTION OF NUMBER OF OTHER RECREATIONISTS (if perceived a problem, indicate where and the specific number of individuals):_____

_____

_____

PERCEPTION OF RESOURCE IMPACTS (if perceived a problem, indicate where and type of impact it is):_____

_____

_____

PERCEPTION OF PRESENT MANAGEMENT OF AREA (be specific):_____

_____

_____

RECOMMENDATIONS FOR MANAGING THE AREA (be specific):_____

_____

_____

COMMENTS:

Figure 2 (Back-side)

travel itinerary, activity participation, most/least satisfying points of trip, visitor perceptions of the number of other recreationists, resource impacts and present management of area, as well as recommendations for managing the area. Space was provided at the bottom of the form to record additional comments.

It should be noted that during the course of any one conversation it is unlikely that information would be collected about each subject area. When a subject area was not discussed in one conversation then special emphasis was given to including it in the next conversation. See Appendix B for field instructions to the observation/conversation diary.

Field Scheduling

Developing a work schedule for a seasonal employee whose job is to inventory dispersed recreation campsites and to record observation/conversation data for a large area (e.g., District or wilderness) required careful planning. Several rules of thumb were followed.

First, because the recreation phenomenon might vary within a large area (District) in terms of numbers of people, activity participation, management issues and recommendations, and visitor perceived crowding and resource impacts, it was necessary to subdivide the study area into smaller units. In this project, five units (see Map #1 for units, S1, S2, S3, M1, M2) were identified. This permitted information to be collected that was specific to each unit.

Second, the amount of field time allocated to any one unit was approximately proportionate to the amount of recreation use estimated in that unit. For example, if a particular unit received 30 percent of the recreation use on the District, then roughly 30 percent of the seasonal employee's time should be spent in that unit. In this project three weeks of field work was scheduled for S1 as opposed to two weeks in the other units because a higher proportion of the District recreation use has traditionally been occurring in S1.

Third, with regard to observing and conversing with recreationists, it was important to collect data throughout the season and not just at one time period because the recreation phenomenon might vary over the season. In this project, work weeks were allocated so that the seasonal employee would work in each unit (S1, S2, S3, M1, M2) two or more times throughout the June/July/August field season.

Fourth, the last half-day of each work week was scheduled for the office. This permitted the seasonal employee to brief his supervisor on what had been learned, for the supervisor to critically review the information and make possible adjustments, and for information to be summarized. In this project, the seasonal employee was scheduled to work from Thursday to Monday of each week.[3] Monday afternoons were allocated to office work (see Appendix C for daily field schedule).

Fifth, the last week was not allocated at the beginning of the field season. Inevitably occurrences will arise (fire fighting, sickness, weather) which will disrupt a planned work schedule. This last week provided flexibility to rectify schedule disruptions, to spot-check specific areas where additional data was needed, and provided time for the seasonal employee to summarize the data that had been collected over the field season. In essence, the results and conclusion sections of this report were drafted during the employee's last few days.

Figure 3 depicts the field schedule for this project. There were five sampling units, an emphasis (three work weeks) given to unit S1, the work weeks distributed across the June/July/August field season, and the last week was left open for spot checking, data analysis and summary.

---

[3] From a social survey sampling standpoint, it might be better to work staggered weeks so that each week day is a work day at some point during the field season. In this project Tuesdays and Wednesdays were off-days. While this approach might limit the generalizability of the observation/conversation data, it was the most practical approach.

Summer, 1979

Seasonal: Steve Nachtman

District: Richfield Ranger District

Units	June				July				August				Total Weeks
	1	2	3	4	1	2	3	4	1	2	3	4	12
S1	X					X					X		3
S2			X					X					2
S3					X					X			2
M1				X					X				2
M2		X					X						2

Figure 3

Data Analysis and Summary

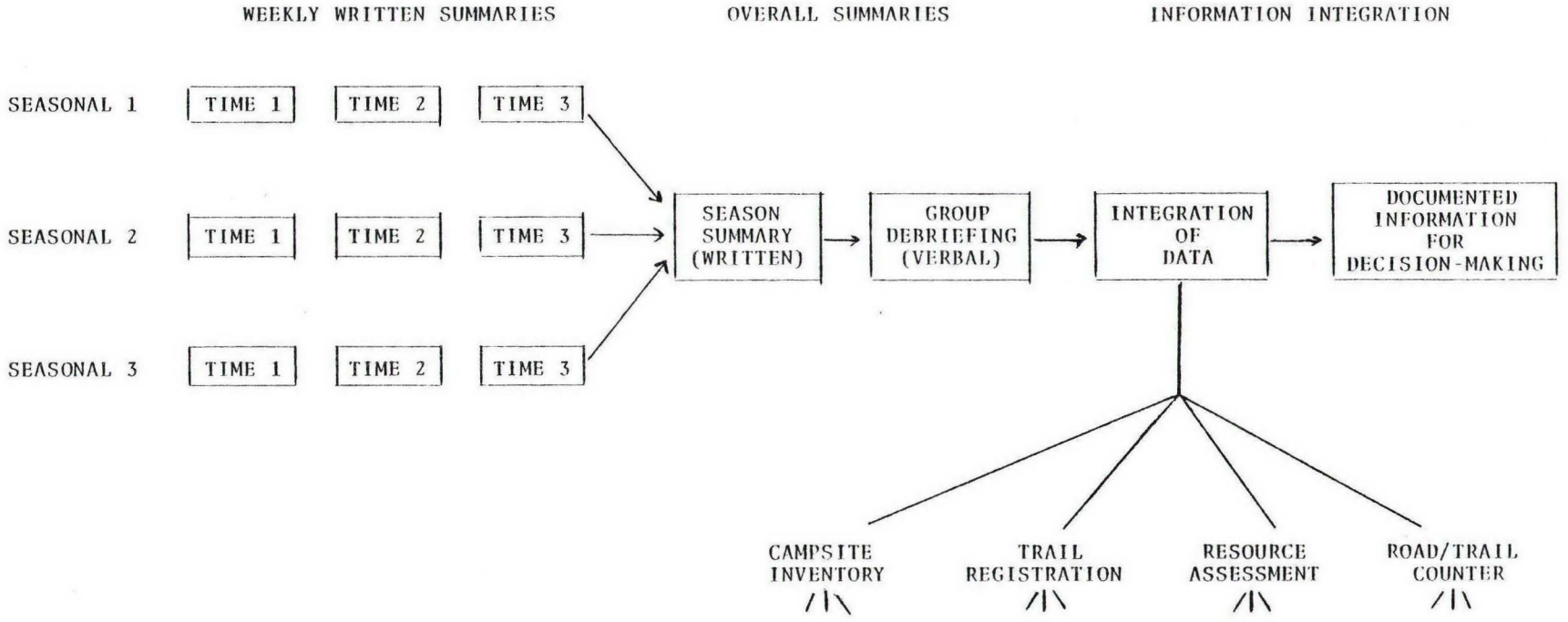
The goal in developing a data analysis/summary methodology for a seasonal employee to follow was to keep it simple, requiring a minimal amount of time, and leading to a managerially relevant summary report. To achieve this goal, the following steps were taken.[4]

One, a file was developed for each sampling unit (S1, S2, S3, M1, M2) in which the unit's respective field data was stored. Two, a summary form was developed for both data collection instruments. Three, the data was summarized every week during office hours as opposed to one general summary at the end of the field season. Four, the employee's supervisor reviewed each summary (particularly the first few) and provided constructive feedback. Five, the weekly summaries provided the basis for preparing the overall field season summary report which was drafted in the last few days of the seasonal's employment. Six, a debriefing "rap" session was scheduled with all the seasonal employees and appropriate District staff in order to verbally exchange information, opinions, and recommendations for management and further data collection efforts. This debriefing session also permitted the District staff to ask specific questions which might not be answered in the written summary reports. Figure 4 is a flow chart which depicts these six steps and indicates how the written summaries and the notes taken at the group debriefing (verbal) session becomes <u>one</u> information input which might help to guide and justify various management actions deemed necessary by the District staff.

The remainder of this data analysis and summary section discusses the specifics related to dispersed campsite inventory, observation/conversation data, and estimating recreation visitor days.

---

[4]Some variations of these planned steps did occur.



FLOW CHART OF DATA COLLECTION, SUMMARY, AND INTEGRATION

Figure 4

Campsite Inventory. The weekly data analysis and summary involved utilizing a blank campsite inventory form as a summary sheet. For each item on the campsite inventory form, the number and percent of campsites identified for each sampling unit was recorded on the summary sheet. For example, if 40 dispersed campsites were identified in unit M1, the number and percent of these 40 campsites having a campsite rating class of 1, 2, 3, 4, or 5 was determined. The most prevalent comments and or suggestions were listed on the back of the summary sheet.

In addition, the specific locations recorded on the field topographic maps were transferred to a permanent office set of topographic maps as well as transferred to a large District-wide wall map. The field data, office summary, and permanent topographic maps were then stored in the appropriate sampling unit file (see Appendix D).

Observation/Conversation Data. While out in the field, one observation/conversation form (Figure 2) was completed for each recreation party observation/conversation which occurred. The data analysis and summary involved utilizing an observation/conversation summary sheet (see Appendix E). Similar to the campsite inventory data, the diary forms were analyzed for each sampling unit. By focusing on one item at a time, the seasonal employee reviewed the completed forms for that week and summarized the data by listing the most prevalent, reoccurring responses (content analysis) and/or by tabulating frequencies, percentages, and averages.[5] Having completed this task the field data and summary sheet were then stored in the appropriate sampling unit file.

---

[5]In addition to the data collection efforts by the Colorado State University summer intern, several other seasonal employees collected observation/conversation data which was passed along and summarized by the CSU summer intern.

Estimating Recreation Visitor Days. A network of fifteen road counters was the basis for estimating recreation visitor days. The road counters were strategically located on the periphery of the Salina and Monroe units. The Fishlake National Forest Engineering staff was principally responsible for installing and maintaining the road counters as well as recording the counter tallies. This data was passed along to the seasonal employee near the end of the field season and estimates derived. Table 15 (in the results section) indicates the mathematics used to derive estimates as well as displaying the actual estimated recreation visitor days occurring between May 27 and September 3, 1979.

RESULTS

This section presents the data in table and narrative form and is divided into three sub-sections (1) campsite inventory, (2) observation/conversation data, and (3) estimated recreation visitor days.

Campsite Inventory Data

Table 1 gives the number and percentage of dispersed campsites by sampling units, planning units and for the Richfield Ranger District. There were 332 dispersed campsites located on the District. Approximately 65 and 35 percent of the total campsites were located in the Salina and Monroe unit, respectively. S1 had the largest number of dispersed campsites (39 percent).

Table 2 shows the percentage of dispersed campsites among the five campsite rating classes (see definition on campsite inventory form). Approximately 85 percent of the sites on the District were rated as class one or two (relatively good) with the remaining 15 percent rated as class three or four (relatively poor). There were no sites identified as class five on the District. Sampling unit S1 had the highest percent of impacted sites with 26 percent of the sites in class three or four.

Table 1. Number and percent of total campsites in each sampling unit of the Richfield Ranger District.

Units	Number	Percent of Total (N = 332)
S1	130	39
S2	60	18
S3	26	8
Salina Subtotal	216	65
M1	61	18
M2	55	17
Monroe Subtotal	116	35
Richfield R. D. Total	332	100

Table 2. Percent of campsites in each campsite rating class by sampling units, planning units, and the Richfield Ranger District.

Units	Campsite Rating Class[a]				
	1	2	3	4	5
S1 (N = 130)	33	41	18	8	0
S2 (N = 60)	75	22	3	0	0
S3 (N = 26)	73	27	0	0	0
Salina Subtotal (N = 216)	50	33	12	5	0
M1 (N = 61)	54	34	10	2	0
M2 (N = 55)	36	49	15	0	0
Monroe Subtotal (N = 116)	45	42	12	1	0
Richfield R. D. Total (N = 332)	48	37	12	3	0

[a]In general terms, the rating classes of 1 to 5 represents a good to poor condition continuum. See methods section of this report for detailed rating class description.

Table 3 indicates the percent of dispersed campsites having specific types of facilities present. All of the campsites had some form of fire pit or fire ring with very few campsites having other facilities. The second most occurring facility were deer racks which were present in 15 percent of the campsites. No trash cans were present at any of the 332 dispersed campsites. S3 had the highest percentage of campsites containing deer racks (27 percent). Only S1 and M2 contained sites that were within 200 feet of a toilet (7 and 5 percent respectively).

Table 4 indicates the percent of campsites having other campsites in view. Approximately 60 percent of the dispersed campsites on the District had no other campsites in view. S3 had the largest percent of campsites with no campsites in view (73 percent). The largest percent of campsites having 1 or more sites in view occurred in S1 and S2 (42 percent for both), with 12 percent of the campsites in S1 having 4 or more campsites in view.

Table 5 indicates the percent of dispersed campsites having other campsites within 100 feet. Approximately 26 percent of the District campsites had at least one other campsite within 100 feet. S1 was the only sampling unit to have 3 or more campsites located within 100 feet (4 percent).

Table 6 shows the percent of campsites in each overall visual attractiveness rating class (see Appendix A for rating class definition). Twenty percent of the District campsites had views rated as class A, 80 percent class B, with no sites having class C views. S1 had the highest (30 percent) and S3 had the lowest (8 percent) percent of campsites with class A views.

Table 7 shows the percent of campsites at several distances from a road, trail, stream and lake. Approximately 77 percent of the District's campsites were located within 100 feet of a road and 4 percent within 100 feet of a trail. The percent of campsites within 100 feet of a lake or stream was 6 and 24 percent, respectively. Campsites were located within 100 feet of a stream more often on the Salina unit (28 percent) than on the Monroe unit (9 percent).

Table 3. Percent of campsites having facilities present by sampling units, planning units, and the Richfield Ranger District.

Units	Table	Toilet (within 200')	Signs	Fire Ring	Trash Can	Deer Racks	Corrals	Benches
S1 (N = 130)	6	7	9	100	0	15	2	1
S2 (N = 60)	2	0	5	100	0	2	2	3
S3 (N = 26)	0	0	0	100	0	27	12	0
Salina Subtotal (N = 216)	4	4	7	100	0	16	3	1
M1 (N = 61)	7	0	7	100	0	8	2	7
M2 (N = 55)	0	5	0	100	0	18	2	9
Monroe Subtotal (N = 116)	3	3	3	100	0	13	2	8
Richfield R. D. Total (N = 332)	4	4	6	100	0	15	2	4

Table 4. Percent of campsites having other campsites in view by sampling units, planning units, and the Richfield Ranger District.

Units	Campsites in View				
	None	1	2	3	4 or more
S1 (N = 130)	58	12	14	4	12
S2 (N = 60)	58	20	13	9	0
S3 (N = 26)	73	15	12	0	0
Salina Subtotal (N = 216)	60	15	13	5	7
M1 (N = 61)	61	21	18	0	0
M2 (N = 55)	62	16	16	6	0
Monroe Subtotal (N = 116)	61	19	17	3	0
Richfield R. D. Total (N = 332)	60	16	15	4	5

Table 5. Percent of campsites having other campsites within 100 feet by sampling units, planning units, and the Richfield Ranger District.

Units	Percent Number of Campsites within 100 feet			
	1	2	3 or more	Total
S1 (N = 130)	21	3	4	28
S2 (N = 60)	22	4	0	24
S3 (N = 26)	23	0	0	23
Salina Subtotal (N = 216)	21	2	1	25
M1 (N = 61)	16	5	0	21
M2 (N = 55)	20	9	0	29
Monroe Subtotal (N = 116)	19	7	0	26
Richfield R. D. Total (N = 332)	20	4	2	26

Table 6. Percent of campsites in each overall visual attractiveness rating class by the sampling units, planning units, and the Richfield Ranger District.

Units	Overall Visual Attractiveness[a]		
	A	B	C
S1 (N = 130)	16	84	0
S2 (N = 60)	30	70	0
S3 (N = 26)	8	92	0
Salina Subtotal (N = 216)	19	81	0
M1 (N = 61)	21	79	0
M2 (N = 55)	25	75	0
Monroe Subtotal (N = 116)	23	77	0
Richfield R. D. Total (N = 332)	20	80	0

[a]See methods section for detailed explanation of visual attractiveness.

Table 7. Percent of campsites at various distances from a road, trail, stream and lake by sampling unit, planning unit and Richfield Ranger District.

Units	ROADS				TRAILS				STREAMS				LAKES			
	1-50'	51-100'	101-200'	Over 200'	1-50'	51-100'	101-200'	Over 200'	1-50'	51-100'	101-200'	Over 200'	1-50'	51-100'	101-200'	Over 200'
S1 (N = 130)	50	30	12	8	6	3	2	89	24	4	2	70	7	3	2	88
S2 (N = 60)	54	18	13	15	2	0	0	98	30	3	17	50	0	0	0	100
S3 (N = 26)	34	42	12	12	0	0	0	100	15	4	0	81	0	0	12	88
Salina Subtotal (N = 216)	49	28	13	10	4	2	1	93	24	4	6	66	4	2	2	92
M1 (N = 61)	46	31	13	10	2	0	0	98	10	5	0	85	2	2	2	94
M2 (N = 55)	46	27	18	9	0	0	0	100	2	2	7	89	13	0	0	87
Monroe Subtotal (N = 116)	46	29	16	9	1	0	0	99	6	3	4	87	7	1	1	91
Richfield R. D. Total (N = 332)	48	29	13	10	3	1	1	95	18	4	5	73	5	1	2	92

In summary, there were 332 campsites inventoried on the District with 65 and 35 percent on the Salina and Monroe units, respectively. About 85 percent of these campsites were rated class 1 or 2 and 15 percent class 3 or 4 (there were no class 5's).[6] Every campsite had a fire pit or ring, 15 percent had deer racks, with very few campsites having other facilities. Approximately 26 percent of the campsites had at least one other campsite within 100 feet and 40 percent had at least one other campsite in view. About 77 percent of the campsites were within 100 feet of a road. There were few camspites within 100 feet of a trail, stream, and lake. Percentages were fairly homogeneous in regard to the two planning units, with a more noticeable difference occurring when comparing the sampling units. S1 differed the most by having a greater percentage of campsites, facilities, other campsites within 100 feet, and class 3 and 4 campsites.

Observation/Conversation Data

Table 8 shows the number of dispersed recreation observations and conversations obtained. There were 138 observations from which 48 conversations were conducted on the District. The greatest number of observations and conversations were obtained in S1 and M2. Tables 9-14 present the observation/conversation data with respect to the Salina and Monroe planning units on the Richfield Ranger District.

Observation

Table 9 indicates the percent of people in each age group. One half of the users on the District were younger than 25-years-old. In general,

---

[6] Impacted sites were considered those campsites rated as class 3 or 4. There were no class 5 sites on the District. There were 51 impacted sites on the District with 67 percent located in S1. Relative to non-impacted sites, the impacted sites had a greater percent of tables, toilets, class A views, 4 or more sites in view and were more often located within 50 feet of a road or lake.

Table 8. The number of dispersed recreation party observations and interviews by sampling unit, planning unit, and the Richfield Ranger District.

Units	Number of Party Observations	Number of Party Interviews
S1	55	20
S2	13	5
S3	3	3
Salina Subtotal	71	28
M1	21	3
M2	46	17
Monroe Subtotal	67	20
Richfield R. D. Total	138	48

Table 9. Percent of dispersed recreationists in each age group by planning unit and the Richfield Ranger District.

Units	Age Classes (Years)				
	15 and Under	16-25	26-35	36-50	Over 50
Salina Subtotal (N = 239)[a]	24[b]	25	21	16	14
Monroe Subtotal (N = 235)	34	18	23	13	12
Richfield R. D. Total (N = 474)	29	21	23	14	13

[a]Age information was observed and recored for 239 users on the Salina planning unit.

[b]24 percent of the persons observed on the Salina planning unit were 15 years or younger.

recreationists visiting the Monroe unit were slightly younger than recreationists visiting the Salina unit.

Table 10 indicates the percent of parties by group size and the average party size. The average party size on the District on both planning units was 3.6 people. The most prevalent party size consisted of two persons (43 percent) followed by five or more persons (26 persons).

Tables 11 and 12 indicate the average length of stay, average number of nights and percent of recreation parties by length of stay time classes. The average length of stay was 36 hours for the Salina unit, 39 hours for the Monroe unit, and 38 hours for the District. The average number of nights spent on the District was 1.5. Approximately 50 percent of the District visitors were day-users (less than 18 hours), with 20 percent of the visitors spending three or more days.

Table 13 gives the percent of parties by their mode of travel. The most common mode of travel on the District was by non 4-wheel drive vehicles (48 percent), followed by 4-wheel drive vehicles (43 percent). Approximately 18 percent of the parties had a trailer or camper. The Monroe unit had a higher percent of 4-wheel drive vehicles while the Salina unit had a higher percent of non 4-wheel drive vehicles.

Table 14 gives the percent of parties engaging in various recreational activities. Fishing (38 percent) was the most popular activity on the District, followed by camping (29 percent), bow hunting (25 percent) and driving/sightseeing (14 percent). Less than 10 percent of the District's recreationists participated in picnicking, wood cutting, motorcycling, hiking/walking and horseback riding. Motorcycling was more popular on the Salina unit and wood cutting on the Monroe unit.

In summary, the results did not vary considerably between the two planning units. Analysis showed 50 percent of users were 25 years or younger, an

Table 10. Percent of dispersed recreation parties by size class and the average party size by planning unit and the Richfield Ranger District.

Units	Party Size Classes					Average Party Size
	1	2	3	4	5 or more	
Salina Subtotal (N = 67)	1	46	14	14	25	3.6
Monroe Subtotal (N = 66)	12	39	9	12	27	3.6
Richfield R.D. Total (N = 133)	7	43	11	13	26	3.6

Table 11. The average length of stay and average number of nights by planning unit and the Richfield Ranger District.

Units	Average Length of Stay (Hours)	Average Number of Nights
Salina Subtotal (N = 25)	36.1	1.4
Monroe Subtotal (N = 15)	39.1	1.6
Richfield R. D. Total (N = 40)	37.7	1.5

Table 12. Percent of dispersed recreation parties in each time class by planning unit and the Richfield Ranger District.

Units	Length of Stay					
	6 or less Hours	7-17 Hours	18-24 Hours	25-71 Hours	3-6 Days	Greater than 6 Days
Salina Subtotal (N = 25)	23	20	8	20	24	0
Monroe Subtotal (N = 15)	40	13	27	7	0	13
Richfield R. D. Total (N = 40)	33	17	15	15	15	5

Table 13. Percent of parties mode of travel by planning unit and the Richfield Ranger District.

Units	Mode of Travel						
	4-wheel	Non 4-wheel[a]	Hike	Horse	Trailer/ Camper	Motorbike	Other[b]
Salina Subtotal (N = 70)	40	56	0	1	20	11	3
Monroe Subtotal (N = 66)	47	39	3	0	17	3	2
Richfield R. D. Total (N = 136)	43	48	1	1	18	7	2

[a]Non 4-wheel drive vehicles were either automobiles or 2-wheel drive pickup trucks.

[b]Other modes of travel include dune buggies, bicycles and vans.

Table 14. Percent of dispersed recreation parties engaging in various recreational activities by sampling unit and the Richfield Ranger District.

Salina	Monroe	Richfield R. D.
Fishing (31)	Fishing (44)	Fishing (38)
Bow Hunt (29)	Camping (30)	Camping (29)
Camping (27)	Bow Hunt (21)	Bow Hunt (25)
Driving/ Sightseeing (16)	Driving/ Sightseeing (12)	Driving/ Sightseeing (14)
Motorcycling (11)	Wood Cutting (12)	Picnicking (8)
Picnicking (11)	Picnicking (5)	Wood Cutting (7)
Horseback Riding (5)	Hiking/Walking (4)	Motorcycling (6)
Hiking/Walking (4)	Motorcycling (2)	Hiking/Walking (4)
Wood Cutting (2)	Horseback Riding (0)	Horseback Riding (1)

average party size of 3.6 people, an average length of stay of 38 hours, and an average of 1.5 nights. About 50 percent were day users and 20 percent staying three or more days. The most popular mode of travel was non 4-wheel drive vehicles (48 percent). Fishing, camping, hunting and driving/sightseeing were the most popular recreation activities.

Conversation

The following section includes information summarized from the conversation diary. The responses are generally listed from most to least often mentioned.

A. Users' responses as to their most satisfying points of trip.
   Salina 1) The mountain environment - scenic qualities and naturalness
   2) Getting away (change of pace)
   3) Peacefulness
   4) Good fishing
   5) Cool temperatures
   Monroe 1) The mountain environment - scenic qualities and naturalness
   2) Getting away (change of pace)
   3) Peacefulness
   4) Good fishing
   5) Observing wildlife

B. Users' responses as to their least satisfying points of trip.
   Salina 1) Poor fishing
   2) Hunter related - too many, litter, resource damage
   3) Weather related
   4) Lack of game
   5) Snakes
   Monroe 1) Poor fishing
   2) Too many people
   3) Hunter related - too many, litter, resource damage
   4) Weather related

C. Users' responses as to their perception of number of other recreationists.
   Salina 1) Never a problem
   2) High use only during hunting season
   3) Increased use on weekends

Monroe 1) Never a problem
2) High use only during hunting season

D. Users' responses as to their perception of resource impacts.

Salina 1) Degradation due to excessive off-road travel
2) Littering
3) Redistribution and stress on wildlife resulting from human activities

Monroe 1) Increased signs of use - garbage, damaged trees
2) Excessive silt in some reservoirs

E. Users' responses as to their perception of present management of area.

Salina 1) The area is managed mainly for range purposes. Recreation management is minimal
2) Roads are poorly maintained
3) Not perceived as a recreationally "managed" area

Monroe 1) Would like continuation of minimal recreation management as a deterrant to use
2) A fish stocking bias toward the larger resort lakes (specifically Fish Lake)
3) Not perceived as a recreationally "managed" area

F. Users' responses as to their recommendations for managing the area.

Salina 1) Upgrade existing roads
2) More facilities - water, tables and toilet facilities
3) Partial or total closure of some roads - especially during hunting season
4) Closure of stocked waters for two weeks after stocking

Monroe 1) Increase game populations and fish stocking rates
2) Improve roads
3) More facilities
4) Educate users to minimize resource damage
5) Oppose wilderness designation

In reference to the management items E and F, there appeared to be a conflict among responses. Users would not mind more improvements, but if there was a choice between increased use levels versus the present situation, the majority of people would prefer the present situation.

G. Travel Itinerary

S1: Most people entering S1 originated in Richfield or Salina. They primarily entered and exited from the I-70 Gooseberry exit and travelled the Gooseberry road. The most popular destination sites were Twin Ponds, Cold Springs, Gooseberry Creek and Salina reservoir.

S2: Most people entering S2 originated in either Salina or Redmond. They primarily entered and exited from the Willow Creek and Salina Creek roads. Their most popular destination sites were Anthony Flat and Salina Creek.

S3: Most people reached S3 by travelling I-70 east. S3 areas north of I-70 were primarily entered by Convulsion Canyon and to a lesser extent the Old Woman area. S3 areas south of I-70 were usually entered by Tommy Hollow. In general, S3 had few destination points (except for Skutumpah Reservoir) because driving/sightseeing was the principle activity.

M1: Most people visiting M1 originated in local communities. They primarily entered and exited from the Monroe Mountain, Monroe Canyon and Koosharem roads. The most popular destination sites were Monroe Canyon, Big Lake and the Monroe Peak area. A popular trip was travelling across the unit from Monroe Canyon to Koosharem.

M2: Most people visiting M2 originated in Richfield, Monroe, Greenwich or Koosharem. They primarily entered and exited from the Koosharem and Box Creek road. The most popular destination sites were Box Creek, Upper and Lower Box Creek Reservoirs and Manning Meadow Reservoir.

The following four points summarize the conversation data:

1) The most satisfying points of the trip were the mountain environment, getting away and peacefulness. The least satisfying were poor fishing and hunter related.

2) People felt that the number of recreationists were rarely a problem except during hunting season. Responses to perceptions of resource impacts dealt mainly with off-road travel and increased signs of use.

3) Most people perceived minimal recreation management on the District. Their management recommendations dealt mainly with improving roads, more facilities and increased populations of game and fish. Managing for low use levels was desired over additional conveniences.

4) Most users originated from local communities, usually entering and exiting from the better maintined forest roads. Streams and reservoirs were the most popular destinations.

Estimated Recreation Visitor Days

Recreation visitor days were estimated based on road counter data, observation/conversation data, and professional judgement. With respect to Table 15, the road counters provided the traffic counter clicks (X_1); observation/conversation data helped to determine the average number of people/vehicle (X_6), average visitor days/person (X_8), and the travel route coefficient (X_2); professional judgement helped to determine the percent of recreation vehicles (X_5) in each sampling unit and to estimate traffic counter clicks if and when the traffic counter(s) were not functioning. The top row of Table 15 indicates which variables were multiplied to determine respective estimates.

A total of 160,282 recreation visitor days were estimated for the Richfield Ranger District between May 27 and September 3, 1979. Approximately 40 and 60 percent of the visitor days occurred on the Monroe and Salina units,

Table 15. Estimated recreation visitor days for the Richfield Ranger District (May 27 - September 3, 1979).

	Traffic Counter Clicks X_1	Travel Route Coefficient[a] X_2	Total Vehicles X_3 (X_1*X_2)	Percent of Recreation Vehicles X_4	Total Recreation Vehicles X_5 (X_3*X_4)	Average # of People/Vehicle X_6	Total Recreation Visitors X_7 (X_5*X_7)	Average Visitor Days/Person X_8	Total Visitor Days X_9 (X_7*X_8)
S1	9,980	.6	5,988	.90	5,389	3	16,168	3.2	51,736
S2	6,443	.6	3,866	.85	3,286	3	9,858	3.2	31,545
S3	3,754	.6	2,252	.60	1,351	3	4,054	3.2	12,974
Salina Unit			12,106		10,026		30,080		96,255
M1	7,528	.6	4,517	.85	3,389	3	11,517	3.2	36,854
M2	5,500	.6	3,330	.85	2,831	3	8,492	3.2	27,173
Monroe Unit			7,847		6,670		20,009		64,027
Richfield Ranger District	33,255	.6	19,953	.84	16,696	3	50,089	3.2	160,282

[a]The travel route coefficient helps to account for vehicles tripping road counters one or two times during their travel. For example, if all vehicles tripped two counters (that is, they were recorded twice), then the total number of clicks would have to be multiplied by .5 (½) to determine total traffic. It was believed that a considered percentage of traffic only tripped one counter.

[b]A heavy reliance on professional judgement was used in S3 because the road counters were not strategically located. No counters were positioned in the southern half of S3 below Interstate 70.

respectively. There was an estimated 19,953 total vehicles (X_3) of which 16,696 were recreation vehicles (X_5) and 50,089 recreation visitors (X_7).

Two additional factors might be considered in examining Table 15 which are based on professional judgement. The first factor relates to the accuracy of these recreation visitation estimates. In light of the inherent capabilities of the data base (road counter tallies and observation/conversation data), it is believed that the actual number of recreation visitor days is likely to be within $\pm$ 20 percent of the estimated visitor days.

The second factor relates to estimating recreation visitor days for the entire calendar year. Previous experience in Colorado has suggested that 30 to 40 percent of visitor days occur before and after the summer season (June, July, August). Assuming that 35 percent of visitor days occur outside of the summer season, the 1979 total estimated recreation visitor days for the Richfield Ranger District would be approximately 216,380, plus or minus 20 percent.

CONCLUSION

The section identifies the personal insights of the seasonal recreation employee and his recommendations for recreation management.

Personal Insights

The following insights are based on the general field experience of the seasonal recreation employee. They are not based on any data but rather are feelings or impressions relating to the current recreation situation.

1) A large percentage of the dispersed recreation sites were used only during the hunting season.

2) When comparing hunter and non-hunter campsites, the location of hunter campsites was generally less dependent on aesthetics, and proximity to reservoirs and streams.

3) Some of the degradation at impacted campsites can be attributed to livestock use. Characteristics that made campsites attractive to recreationists (shade and water) also attracted livestock.

4) Users desiring conveniences would bring their trailers, campers and motorhomes rather than relying on Forest Service facilities.

5) Users were mainly locals that tended to visit the same specific locale year after year.

6) Many areas on the District were "untapped" and could provide excellent activity and experience opportunities. Many areas had little or no recreation visitation.

7) Peak dispersed recreation use coincided with holidays, hunting seasons, and to a lesser extent, weekends.

8) Snow accumulation at higher elevations caused access problems. There was minimal dispersed recreation use before July 4th.

9) There was little or no hiking or backpacking on the District. Users were extremely vehicle oriented. Even the bow hunters primarily hunted from the forest roads.

10) Most trails were underutilized by recreationists due possibly to the lack of adequate signing and trail maintenance.

11) There was inadequate informational and directional signing throughout the District (roads and trails).

12) Many of the District roads were poorly located and/or maintained and posed a serious safety hazard to visitors.

13) Severe road damage occurred from travelling on wet roads, especially during the early snow melt. This action often left roads damaged and hazardous for the entire season.

14) The District has an overabundance of primitive roads caused by off-road motorists exploring the area.

15) Dispersed recreationists were seeking an experience opportunity involving a high degree of interaction with the natural environment, a change of pace from their daily routines, and in-group relations; a moderate degree of privacy and solitude; a low degree of challenge and risk-taking.

16) The vast majority of recreationists were receptive to conversation, with many seeking information about rules and regulations, and where to find their desired activity and experience opportunity.

Recommendations for Management

The following list of possible recreation management actions have been developed based upon the data summary and personal insights of the seasonal recreation employee. The feasibility of each action was not explicitly considered in developing the list.

1. Establish a visitor information program for the District which possibly involves maps, brochures, bulletin boards, newspaper articles, and other local media. Information could include:

   1) Rules and regulations
   2) Where specific activity and experience opportunities are provided on the District
   3) Maps showing locations of trails, roads and dispersed campsites, with possible descriptions (i.e., best 50 campsites)
   4) Visitor education (public safety, recreation behavior ethics, etc.)
   5) Special issues (high fire danger, temporary campsite or road closures)

2. Increase signing on the District as part of a visitor information program and so users can more easily locate roads, trails, and destinations. Priority should be given to major entry/exit and destination points. Not all the roads, trails, and destinations require signing.

3. Observation/conversation data collection should be continued in order to check on the reliability of the 1979 data and to keep abreast of the current recreation situation.

4. Coordination is necessary with other Districts, the Supervisor's Office, and adjacent National Forests with regard to travel plans (roads and trails), and visitor information and signing programs.

5. A survey of District's roads should be undertaken to determine which roads are unsuitable for vehicular travel. The unsuitable roads should be (1) improved and maintained, (2) closed, and/or (3) adequately signed to inform recreationists of the reasons such actions were taken (e.g., public safety, adverse resource impacts, etc.).

6. Impacted campsites (class 3 and 4 sites) should be further assessed to decide if their closure is necessary. Those impacted sites which are in close proximity to other class 1 or 2 campsites should be closed. One approach to closing sites might be to remove the firerings and other facilities or obvious indicators that a campsite exists. These campsites should be monitored to assess the effectiveness of this recommended approach to closure of a site.

7. Table facilities should be provided at a higher percent of the District's dispersed campsites. The objective being to provide opportunities for users seeking these conveniences (rather than to attract increased use levels) and to distribute recreationists to suitable, underutilized areas.

8. Several District trails should be appropriately signed and maintained to provide quality hiking opportunities. Those visitors seeking hiking opportunities should be encouraged to use these trails. These trails should be monitored to determine if a significant hiking demand exists.

9. Fishing opportunities should be enhanced by possibly increasing stocking rates, habitat improvement, and/or to the extent possible, decreasing the speed or amount of reservoir drawdown.

CASE STUDY SUMMARY

The idea of utilizing seasonal employees to collect data is not new to U.S. Forest Service personnel. Seasonal employees have been conducting campsite inventories (and other field tasks), maintaining a note pad type of diary, and preparing written summaries for a long time. What this case study demonstrates is that seasonal employees can be much more efficiently and effectively utilized than is presently the situation. Through careful planning, supervision and following the suggested methodology in this report, the contribution of seasonal employees to the U.S. Forest Service can be much more significant in terms of providing (1) a larger amount of data, (2) more accurate data, (3) more specific data, and (4) a more managerially relevant and useful summary report, as demonstrated in the results and conclusion sections of this report. It is our belief that seasonal employees can be one of the most efficient, effective, and economical means of keeping abreast of the current field situation and improving public relations.

Appendix A

Visual Attractiveness Rating Class Definitions

VISUAL ATTRACTIVENESS CLASS DEFINITIONS

1) Distincitve (Class A) - this site provides the opportunity to view those areas where features of landform, vegetative patterns, water forms and rock formations are of unusual or outstanding visual quality.

2) Common (Class B) - this site provides the opportunity to view those areas where features contain variety in form, line, color, and texture or combinations thereof but which tend to be common throughout the character type and are not outstanding in visual quality.

3) Minimal (Class C) - this site provides the opportunity to view those areas whose features have little change in form, line, color, or texture. Includes all areas with panoramic views that are not found under classes 1 and 2.

Appendix B

Field Instructions for Observation/Conversation Diary

6/4/79

FIELD INSTRUCTIONS FOR OBSERVATION/CONVERSATION DIARY

The observation/conversation diary is a simple, structured mechanism to record relevant recreation visitor information. The diary has two basic sections: (1) factors which might be observed and (2) factors which might be gained through casual conversation. Note the specific factors listed on the form. While performing your primary field tasks, record the relevant information gained from observing (seeing) and/or from conversing with recreationists. Oftentimes you might see a recreation party but not talk with them. In that case, simply leave the conversation section of the diary blank and complete the observation section. It is unlikely that every subject area (item) will be completed in any one observation or conversation.

Conversation information should be obtained through simple conversation that you steer toward the subject areas on the form. This information should be recorded after the departure of the respondents. Do not feel that every factor should be addressed during the course of each conversation. When a factor is not addressed during one conversation, place a special emphasis on this factor in the following conversation. Do not ask direct questions -- casual conversation is most desirable. Avoid interjecting your opinions, prejudices, and biases into the conversation.

For the purpose of this study, the Richfield Ranger District is zoned into five areas as outlined on the attached map. M1 and M2 on the Monroe Planning Unit, and S1, S2, and S3 on the Salina Planning Unit. Please enter the zone and specific location (road, creek, reservoir, etc.) that the observation/conversation took place.

This information that you obtain will greatly aid recreation managers in planning and managing the Richfield Ranger District. If you have any questions contact Steve Nachtman.

Appendix C

Seasonal Employee Daily Field Schedule

May - Cont.

Sunday	20	
Monday	21	Office Work
Tuesday	22	Off
Wednesday	23	Off
Thursday	24	Office Work
Friday	25	Office Work
Saturday	26	Field Testing - Salina Unit
Sunday	27	Field Testing - Salina Unit
Monday	28	Office Work
Tuesday	29	Off
Wednesday	30	Off
Thursday	31	Inventory/Interview - S1

June

Friday	1	Inventory/Interview - S1
Saturday	2	Inventory/Interview - S1
Sunday	3	Inventory/Interview - S1
Monday	4	Office Work
Tuesday	5	Off
Wednesday	6	Off
Thursday	7	Inventory/Interview - M2
Friday	8	Inventory/Interview - M2
Saturday	9	Inventory/Interview - M2
Sunday	10	Inventory/Interview - M2
Monday	11	Fire Training
Tuesday	12	Fire Training
Wednesday	13	Fire Training
Thursday	14	Inventory/Interview - S2
Friday	15	Inventory/Interview - S2

June - Cont.

Saturday	16	Inventory/Interview - S2
Sunday	17	Inventory/Interview - S2
Monday	18	Office Work
Tuesday	19	Off
Wednesday	20	Off
Thursday	21	Off
Friday	22	Inventory/Interview - M1
Saturday	23	Inventory/Interview - M1
Sunday	24	Inventory/Interview - M1
Monday	25	Office Work
Tuesday	26	Off
Wednesday	27	Off
Thursday	28	Inventory/Interview - S3
Friday	29	Inventory/Interview - S3
Saturday	30	Inventory/Interview - S3

July

Sunday	1	Inventory/Interview - S3
Monday	2	Office Work
Tuesday	3	Off
Wednesday	4	Off
Thursday	5	Inventory/Interview - S1
Friday	6	Inventory/Interview - S1
Saturday	7	Inventory/Interview - S1
Sunday	8	Inventory/Interview - S1
Monday	9	Office Work
Tuesday	10	Off
Wednesday	11	Off

July - Cont.

Thursday	12	Inventory/Interview - M2
Friday	13	Inventory/Interview - M2
Saturday	14	Inventory/Interview - M2
Sunday	15	Inventory/Interview - M2
Monday	16	Office Work
Tuesday	17	Off
Wednesday	18	Off
Thursday	19	Inventory/Interview - S2
Friday	20	Inventory/Interview - S2
Saturday	21	Inventory/Interview - S2
Sunday	22	Inventory/Interview - S2
Monday	23	Office Work
Tuesday	24	Off
Wednesday	25	Off
Thursday	26	Inventory/Interview - M1
Friday	27	Inventory/Interview - M1
Saturday	28	Inventory/Interview - M1
Sunday	29	Inventory/Interview - M1
Monday	30	Office Work
Tuesday	31	Off

August

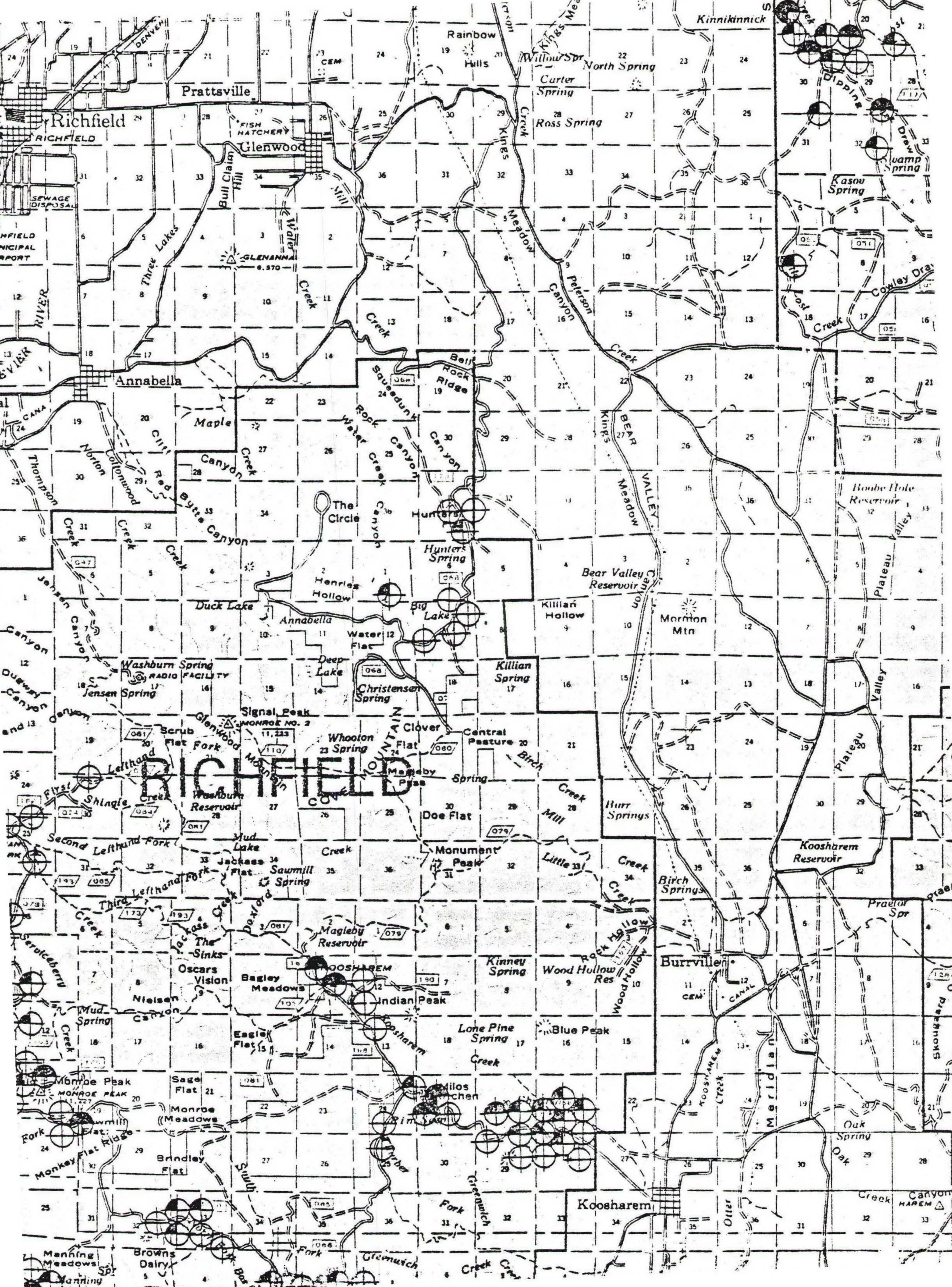
Wednesday	1	Off
Thursday	2	Inventory/Interview - S3
Friday	3	Inventory/Interview - S3
Saturday	4	Inventory/Interview - S3
Sunday	5	Inventory/Interview - S3
Monday	6	Office

August - Cont.

Tuesday	7	Off
Wednesday	8	Off
Thursday	9	Inventory/Interview - Open (as needed)
Friday	10	Inventory/Interview - Open
Saturday	11	Inventory/Interview - Open
Sunday	12	Inventory/Interview - Open
Monday	13	Office
Tuesday	14	Off
Wednesday	15	Off
Thursday	16	Inventory/Interview - Open
Friday	17	Inventory/Interview - Open
Saturday	18	Inventory/Interview - Open
Sunday	19	Inventory/Interview - Open
Monday	20	Office Work
Tuesday	21	Office - Summary
Wednesday	22	Office - Summary
Thursday	23	Office - Summary
Friday	24	Office - Summary
Saturday	25	
Sunday	26	
Monday	27	
Tuesday	28	
Wednesday	29	
Thursday	30	
Friday	31	

Appendix D

Example of Dispersed Campsite Inventory Summary Map


Richfield
Prattsville
Glenwood
Annabella
Rainbow Hills
Kinnikinnick
North Spring
Carter Spring
Ross Spring
Willow Spr
Fish Hatchery
Sewage Disposal
Bull Claim Hill
Glenanna
Three Lakes
Water Creek
Mill Creek
Kings Meadow Creek
Peterson Canyon Creek
Kasou Spring
Swamp Spring
Dipping Drew
Lost Creek
Cowley Draw
Sevier River
Bell Rock Ridge
Squeedunk Canyon
Rock Water Creek Canyon
Maple Canyon Creek
Cliff
Norton
Cottonwood
Thompson Creek
Red Butte Canyon
The Circle
Hunters
Hunters Spring
Henries Hollow
Duck Lake
Annabella
Big Lake
Water Flat
Deep Lake
Killian Spring
Killian Hollow
Bear Valley Reservoir
Bear Valley Canyon
Kings Meadow
Mormon Mtn
Boobe Hole Reservoir
Plateau Valley
Jensen Canyon
Dugway Canyon
Washburn Spring
Radio Facility
Jensen Spring
Christensen Spring
Signal Peak
Monroe No. 2
11,223
Scrub Flat
Glenwood Mountain
Whooton Spring
Clover Flat
Central Pasture
Birch Creek
Lefthand Fork
First Shingle Creek
Washburn Reservoir
RICHFIELD
Magleby Pass
Spring
Doe Flat
Mill Creek
Burr Springs
Koosharem Reservoir
Second Lefthand Fork
Mud Lake
Jackass Flat
Saumill Spring
Monument Peak
Little Creek
Birch Springs
Praetor Spr
Third Lefthand Fork
Jackass Creek
Doxford
Magleby Reservoir
Rock Hollow
Serviceberry
The Sinks
Oscars Vision
Bagley Meadows
Kooshareem
Kinney Spring
Wood Hollow Res
Wood Hollow
Burrville
Nielsen Canyon
Indian Peak
Mud Spring
Eagle Flat
Lone Pine Spring
Blue Peak
Kooshareem Creek
Meridian
Monroe Peak
Sage Flat
Milos Kitchen
Monroe Meadows
Sawmill Flat
Monkey Flat Ridge
Brindley Flat
Oak Spring
Oak Creek
Greenwich Creek
Koosharem
Otter Creek
Manning Meadows
Browns Dairy
Canal
Cem
Airport

Appendix E

Observation/Conversation Summary Sheet

OBSERVATION DIARY SUMMARY

Inclusive dates: from _____ to _____

General location of work:

Number of parties: _____ Average size of parties: _____

Description of parties (e.g., sex, family or friends, average age)

Mode of travel:

Percentage of parties: (1) in transit _____ at destination site _____

(2) on road/trail _____ off road/trail _____

Principle activities:

iolations of rules and regulations:

Other observations:

CONVERSATION DIARY SUMMARY

Inclusive dates: from _____ to _____

General location of work:

Total number of parties: #_____ Total hours visiting area: #_____

Average hours per party: #_____ Average number of nights: #_____

Travel itineraries (include entrances, exits, and destinations):

Recreation activities participated in:

Most satisfying points of trip:

Least satisfying points of trip:

Perception of number of other recreationists:

Perception of resource impacts:

Perception of present management of area:

ecommendations for managing the area:

Comments:

ADDENDUM TO:

A MORE EFFICIENT AND EFFECTIVE UTILIZATION

OF A

U.S. FOREST SERVICE SEASONAL EMPLOYEE

RESULTS OF OBSERVATION/CONVERSATION DATA

FALL SEASON, 1979

Prepared for

Richfield Ranger District
Fishlake National Forest
USDA-Forest Service
Richfield, Utah 84701

Prepared by

Steven C. Nachtman
Research Assistant

Department of Recreation Resources
College of Forestry and Natural Resources
Colorado State University
Fort Collins, Colorado 80523

TABLE OF CONTENTS

		Page
I.	Purpose	1
II.	Observation/Conversation data	2
	1. Observation	3
	2. Conversation	5
	Appendix	
	Seasonal's insights	

LIST OF TABLES

Page

1) The number of dispersed recreation party observations and interviews on sampling unit S1 of the Richfield Ranger District 2

2) Percent of dispersed recreationists in each age group on sampling unit S1 of the Richfield Ranger District 2

3) Percent of dispersed recreation parties by size class and the average party size on Sampling Unit S1 of the Richfield Ranger District 3

4) The average length of stay and average number of nights on sampling unit S1 of the Richfield Ranger District 3

5) Percent of dispersed recreation parties in each time class on sampling unit S1 of the Richfield Ranger District 4

6) Percent of parties mode of travel on sampling unit S1 of the Richfield Ranger District 4

7) Percent of dispersed recreation parties engaging in various recreational activities on sampling unit S1 of the Richfield Ranger District 5

PURPOSE

The purpose of this addendum is to summarize data gained from observation and conversation with dispersed recreationists on the Richfield Ranger District for the fall season (September 4 - November 13, 1979). The problem, study area description, and methodology are presented in the report entitled, "A more efficient and effective utilization of a U. S. Forest Service seasonal employee." The tables in this addendum and the report provide easy comparison between summer and fall seasons.

Due to limited resources, methodology for the fall season differed in two respects: 1) only one seasonal employee collected observation/conversation data[1], and 2) observation/conversation data was collected on only one sampling unit - S1. This sampling unit received the highest percentage of recreation use for the summer season and was assumed to be true for the fall. Due to a small sample size and sampling area, the reader should be cautious in generalizing fall user characteristics for the entire Richfield Ranger District.

---

[1]This seasonal employee was Krista Hurr, whose major responsibility was recreation. Her comments and insights are found in the appendix.

OBSERVATION/CONVERSATION DATA

Table 1 shows the number of dispersed recreation observations and conversations obtained. There were 36 observations from which 33 conversations were conducted. Tables 1 - 7 present the observation/conversation data with respect to sampling unit S1 of the Richfield Ranger District.

Table 1. The number of dispersed recreation party observations and interviews on sampling unit S1 of the Richfield Ranger District

Unit	Number of Party Observations	Number of Party Interviews
S1	36	33

Table 2. Percent of dispersed recreationists in each age group on sampling unit S1 of the Richfield Ranger District

Unit	Age Classes (years)				
	15 and under	16-25	26-35	36-50	over 50
S1[a] (N=121)	17[b]	10	42	23	8

[a]Age information was observed and recorded for 121 users.
[b]17 percent of the persons observed were 15 years or younger.

Table 3. Percent of dispersed recreation parties by size class and the average party size on Sampling Unit S1 of the Richfield Ranger District.

Unit	1	2	3	4	5 or more	Average Party Size
S1 (N=26)	0	19	42	12	27	4.6

OBSERVATION

Table 2 shows the percent of people in each age group. About 65 percent of the users were between 26 and 50 years old. Relatively few people were under 25 years old or over 50 years old (27 and 8 percent, respectively).

Table 3 indicates the percent of parties by group size and the average party size. The average group size was 4.6 people. The most prevalent party size consisted of 3 persons (42 percent), followed by 5 or more persons (27 percent).

Tables 4 and 5 give the average length of stay, average number of nights, and percent of recreation parties by length of stay time classes. The average length of stay was 154 hours (6.4 days) and an average of 5.6 nights. A vast majority of the visitors stayed longer than 6 days (84 percent).

Table 4. The average length of stay and average number of nights on sampling unit S1 of the Richfield Ranger District

Unit	Average Length of Stay (hours)	Average Number of Nights
S1 (N=13)	153.6	5.6

Table 5. Percent of dispersed recreation parties in each time class on sampling unit S1 of the Richfield Ranger District

Unit	Length of Stay		
	Less Than 1 Day	1-6 Days	Greater Than 6 Days
S1 (N=13)	8	8	84

Table 6. Percent of parties mode of travel on sampling unit S1 of the Richfield Ranger District

Unit	Mode of Travel					
	4-Wheel	Non-4-Wheel[a]	Hike	Horse	Trailer/ Camper	Motor-bike
S1 (N=36)	61	78	0	19	67	3

[a]Non-4-wheel drive vehicles were either automobiles or 2-wheel drive pickup trucks.

Table 6 gives the percent of parties by their mode of travel. The most common mode of travel was by non-4-wheel drive vehicles (78 percent), followed by 4-wheel drive vehicles (61 percent). About 67 percent of the parties had a trailer or camper.

Table 7 shows the percent of parties engaging in several recreational activities. Hunting and camping were by far the most popular activities (97 percent), occurring concurrently in all cases. Very few people engaged in horseback riding, fishing, or driving/sightseeing (6, 3, and 3 percent, respectively).

Table 7. Percent of dispersed recreation parties engaging in various recreational activities on sampling unit S1 of the Richfield Ranger District

Unit	Activity				
	Hunting	Camping	Horseback Riding	Fishing	Driving/ Sightseeing
S1	97	97	6	3	3

In summary, the results showed 65 percent of the users were between 26 and 50 years old, an average party size of 4.6 people, an average length of stay of 154 hours (6.4 days), and an average of 5.6 nights. About 84 percent of the visitors stayed longer than 6 days. The most popular mode of travel was by non-4-wheel drive vehicles (78 percent), with many parties having a trailer or camper (67 percent). Hunting and camping were by far the most popular activities (97 percent).

CONVERSATION

The following section includes information from the conversation diary. Due to a low sample size, the conversation data will be presented by a summary of the following four points:

1) The least satisfying points of the trip were excessive road closures and too many people.

2) Responses to perceptions of crowding and resource impacts dealt mainly with excessive use levels and the negative effects of recreationists on wildlife numbers and distribution.

3) In response to management items, people mentioned dissatisfaction with hunting season regulations (too early, too close together, recommended doe hunting).

4) Most people entering S1 were from either Utah or California. They entered and exited from the I-70 Gooseberry exit and mainly traveled the Gooseberry road.

APPENDIX

November 13, 1979

Steve Nachtman:

Perceptions of recreational use of the Richfield District of the Fishlake National Forest, Utah. October 15, 1979 through November 13, 1979.

On October 16th, the Elk hunt ended, but there was no big lull in recreational use for the next 5 days, before the Deer-Rifle Hunt began on October 20th, as I had expected.

Use in the Forest was not as intense as during any of the hunts, for these 5 days, but there was above average activity for all areas developed and dispersed. Activities mainly consisted of people moving camps out that were either not staying for the Deer-Rifle Hunt, or changing locations of camps for same. Or people moving in and setting up camps for the Deer-Rifle Hunt. There were several camps that were left uninhabited during these 5 days, obviously people that didn't want to move camp, but that were still within their 16 day occupancy restriction.

Then with the opening of the Deer-Rifle Hunt on October 20th, use of the Forest became incredible, definitely heavier than any other portion of this use season. Although the entire Forest was crowded during this hunt, dispersed and developed, the Gooseberry area and Rex Reservoir area, Zone S1, by far had the heaviest use. Next in line for use was the Cove Mountain area, Zone M1. And next the Monroe Mountain area, Zones M1 and M2.

Almost all use in Zones M1 and M2 was in the dispersed areas.

Use remained constant as above throughout the hunt, until October 30th when the hunt ended, very quickly, the speed in which all of this happened was probably brought about by the first winter snowstorm, which came opening morning of the hunt. Although the hunting population persisted through winter conditions during the hunt, warming thaws that turned the roads to slick mud, sped everybody back home as soon as it was over.

During this hunt I noticed that easily 90% of the license plates I saw were from Utah and California, more than I expected from California. There were a few from Nevada and other close states, but not many.

Also people generally came in large parties, and had anywhere from 2 to 6 campers or vehicles per camp, and generally liked to stick with their parties and not be interrupted.

Since October 31st until November 13th, use has remained very slow, with only a vehicle every once in a while anywhere in the Forest, probably because most areas are inaccessible to the average recreationist, because of road conditions. There are some 4-wheelers out and about, but not many.

The developed site, Gooseberry Campground has not had any use since the 1st of November. And the developed site Monrovian Park has had very infrequent use since the 20th of October.

Looking back on this 1979 recreational use season, I would say that the Gooseberry Road area has had the most concentrated, heavy use all year. Not only in the dispersed areas, but also the developed area. I have spent the largest amount of time working there out of necessity, and have made the largest number of Observation Diarys there.

KRISTA HURR